

CLAIMS

I claim:

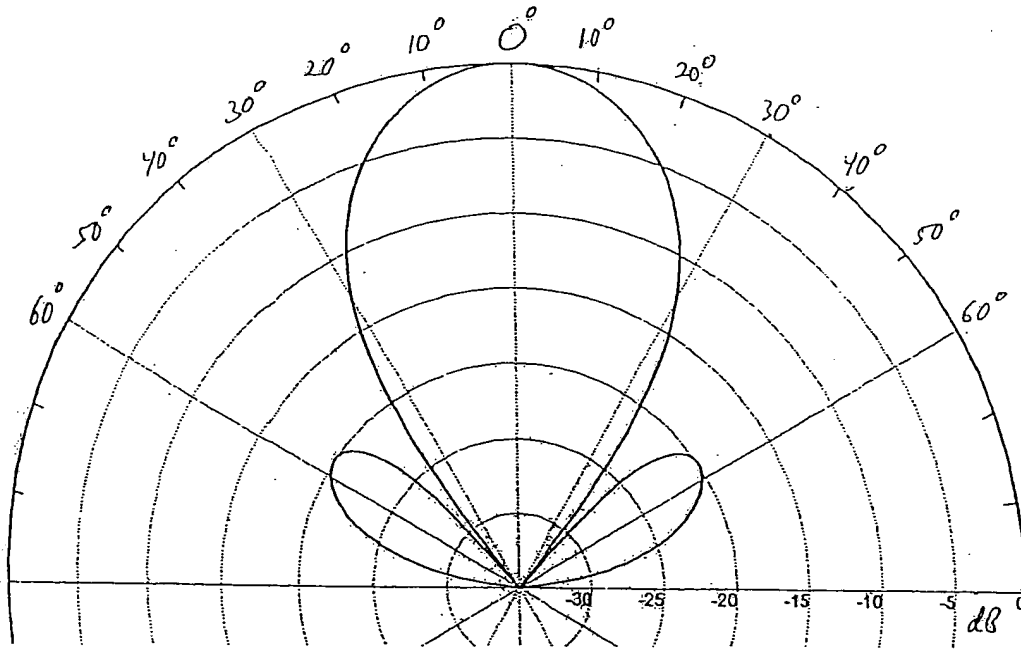
1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Canceled)
8. (Canceled)
9. (Canceled)
10. (Canceled)
11. (Canceled)
12. (Canceled)
13. (Canceled)
14. (Canceled)
15. (Canceled)
16. (Withdrawn) In an object detection radar device, an electronic control system that controls the effective shape of the object detection zone by utilizing electronically controlled transmitted power variation in the radar transmitter circuitry to vary the transmitted power as a function of the instantaneous search range and thereby effectively shaping the detection zone of the radar as a function of range.

17. (Withdrawn) The device of claim 16 where the said control system varies power by digital control using circuitry selected from a group consisting of: digital circuitry, analog circuitry, or a combination thereof.
18. (Withdrawn) The device of claim 16, wherein the electronic control system comprises electronics selected from the group consisting of: an electronically controlled attenuator and an electronic-gain-controlled amplifier.
19. (Withdrawn) In an object detection radar device having radar transmitter circuitry and radar receiver circuitry, an electronic control apparatus adapted to vary the shape of the detection zone of the radar as a function of distance from the transmitter by dynamically adjusting the gain of a radar during its range sweep cycle by a system comprising tuning of transmitter power.
20. (Canceled)
21. (Canceled)
22. (Currently Amended) A method of varying the polar plot of a radar antenna power pattern, said method comprising:

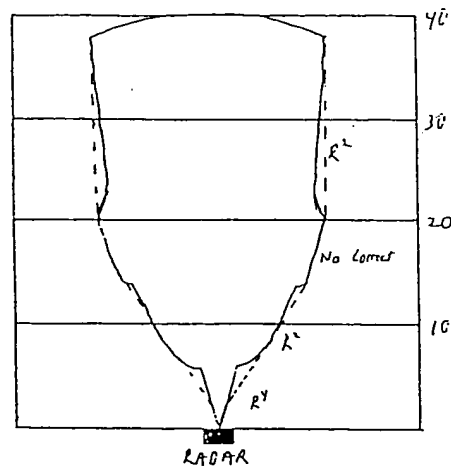
adjusting only gain of a radar's receiver with at least two different corrections at different ranges according to the following algorithm:

Range	Gain
0 – 6 Meters	R^4 Correction
6 - 14 Meters	R^2 Correction
14 - 20 Meters	No Correction (Full Gain)
20 - 40 Meters	R^2 Correction

23. (Previously Presented) The method of Claim 22 to vary the plot of Figure 4:

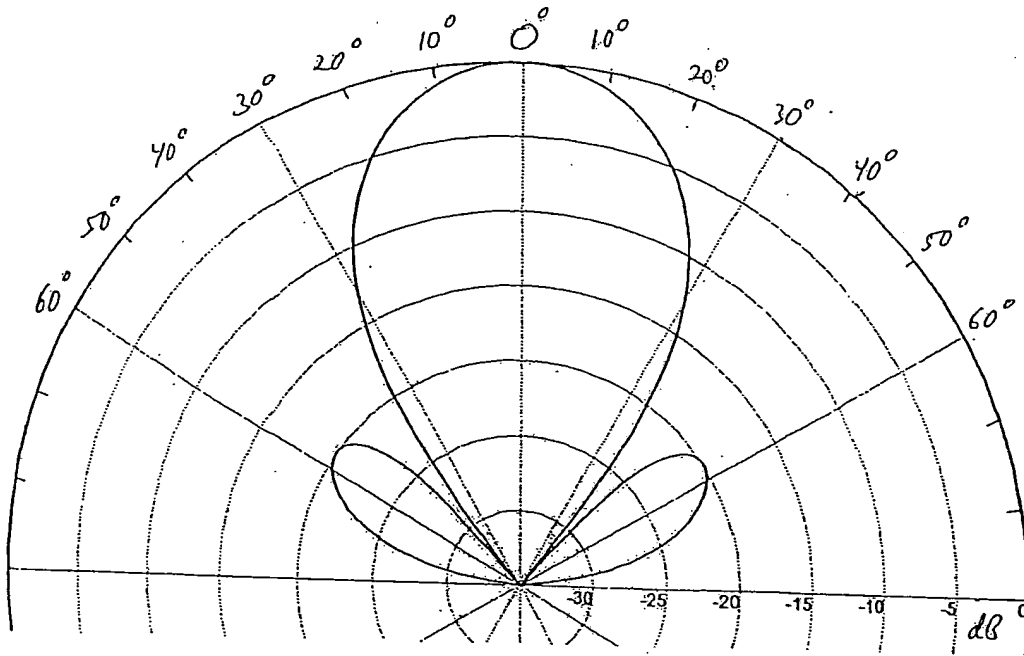


to become the plot of Figure 6A:

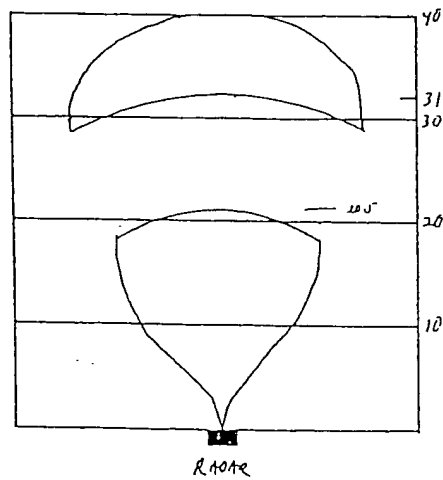


Pattern #1

24. (Currently Amended) The method of Claim 27 [[22]] to vary the plot of Figure 4:

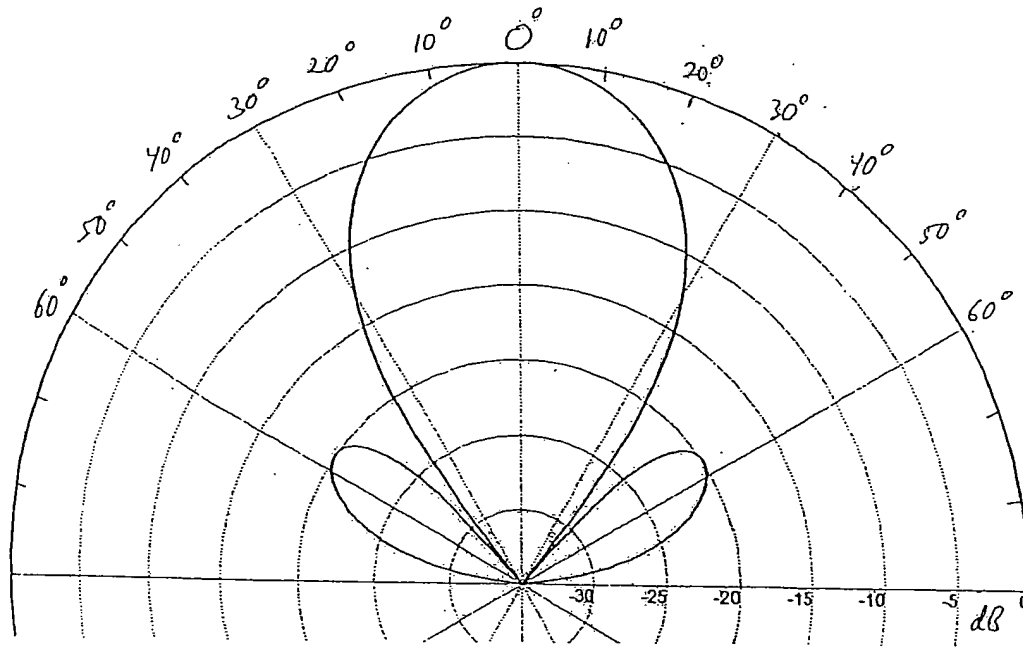


to become the plot of Figure 6B:

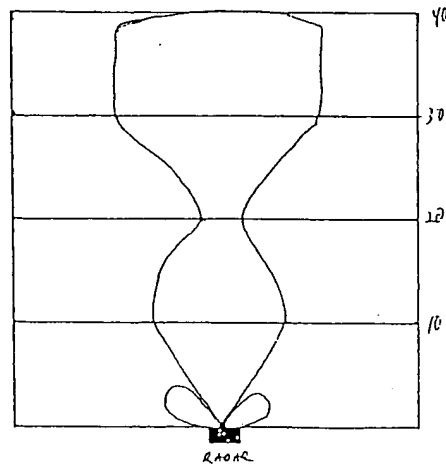


Pattern #2

25. (Currently Amended) The method of Claim 28[[s 22]] to vary the plot of Figure 4:



to become the plot of Figure 6C:



Pattern #3

26. (Cancelled)

27. (New) A method of varying the polar plot of a radar antenna power pattern, said method comprising:

adjusting only gain of a radar's receiver with at least two different corrections at different ranges according to the following algorithm:

Range	Gain
0 - 5 Meters	Low Gain to Avoid Side-Lobes
5 - 20 Meters	Tapered Gain (R^x where x is variable)
20.5 - 31 Meters	No Detection (No Gain or No Tx Power)
31 - 40 Meters	Full Gain for Widest Coverage

28. (New) A method of varying the polar plot of a radar antenna power pattern, said method comprising:

adjusting only gain of a radar's receiver with at least two different corrections at different ranges according to the following algorithm:

Range	Gain
0 - 10 Meters	Approx. R^2 Gain Profile
10 - 20 Meters	Rapidly Decreasing Gain
20 - 30 Meters	Rapidly Increasing Gain
30 - 40 Meters	Approx. R^2 Gain Profile